DOCUMENT RESUME

ED 325 354 SE 051 690

TITLE Elementary School Science Education Program Evaluation Guide, SY90-91. Edition Three.
INSTITUTION Dependents Schools (DOD), Washington, DC. Pacific Region.
PUB DATE Sep 90
NOTE 27p.; For Edition One, see ED 297 939, for Edition Two, see ED 316 424.
PUB TYPE Tests/Evaluation Instruments (160)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Administrator Guides; Curriculum Evaluation; *Educational Assessment; Elementary Education; *Elementary School Science; *Program Evaluation; *Program Improvement; *Science Education; *Science Instruction
IDENTIFIERS *Dependents Schools

ABSTRACT

This guide was developed for the Department of Defense Dependent Schools Pacific Region science coordinator, elementary school principals, and teachers. Its intended purpose is to serve as aid in identifying strengths and weaknesses of science programs in grades kindergarten through grade six. The guide is also used as a notebook by the science coordinator during school visits. Included in the areas to be assessed are: program indicators; program management; budget; library and media center; the use of computers; curriculum guides; time allocations; teaching staff; adopted textbooks; the school improvement plan; and standardized testing. (KR)

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DEPARTMENT OF DEFENSE DEPENDENT SCHOOLS PACIFIC REGION

ELEMENTARY SCHOOL
SCIENCE EDUCATION PROGRAM
EVALUATION GUIDE

SY90-91

ED325354

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EDITION THREE

September 1990

Revision Dates

Computer Document Storage Location
WP01738.010

Distribution: All Pacific Elementary Schools

SE051690

CONTENTS

Title	Page
Introduction	3
List of Supporting Documents	4
Purpose/s of the Visit	5
In Briefing	5
Quality Program Indicators	7
Teachers, Specialists and Administrators Visited	8
Science Program Management	9
Science Budget	10
Library and Media Center	12
Computer Program in Science	14
Science Objectives Guides	15
K-6 Learning & Time Allocation Guides	17
Teaching Staff	18
Adopted Textbooks	20
Teachers of Science Inservice Program	21
North Central Association Evaluation	22
School Improvement Plan	23
Standardized Testing Program	24
General Recommendations	25
Out Briefing	26

INTRODUCTION

The guide was developed for the Department of Defense Dependent Schools Pacific Region science coordinator, elementary school principals and teachers. Its intended purpose is to serve as an aid in identifying strengths and weaknesses of science programs in grades kindergarten through 6. The guide is also used as a notebook by the science coordinator during school visits. Wherever possible, references have been cited in context so that users may, if necessary, consult the supporting documents. A list of those references is provided below.

LIST OF SUPPORTING DOCUMENTS

01. ETG/635-3001/303-5 Memorandum Quality Program Indicators, of 87MAR23.

02. DS Manual 2005.1, Administrators' Guide, section 402.

03. DS Manual 2200.1, Science Objectives for 1985-1992.

04. DS Manual 2000.8, K-6 Learning & Time Allocation Guide. of 85DEC.

05. ERH/635-2151/303-11 Memorandum Approved Textbook Listing, of 89AUG18.

SCHOOL: _____

COUNTRY: _____

VISITATION DATE/S: _____

VISIT NUMBER: _____

PURPOSE/S OF THE VISIT

1. _____

_____

2. _____

_____

3. _____

_____

IN BRIEFING

1. Name/s of individual/s with whom the briefing was held: _____

_____

2. Previous Visit:

   a. Date: _____

   b. Program recommendations made during the previous site visit and actions taken on the recommendations:

      (01) Recommendation: _____

      _____

      Action: _____

      _____

      (02) Recommendation: _____

      _____

      Action: _____

(03) Recommendation:_____

_____

Action:_____

_____

(04) Recommendation:_____

_____

Action:_____

_____

(05) Recommendation:_____

_____

Action:_____

_____

(06) Recommendation:_____

_____

Action:_____

_____

(07) Recommendation:_____

_____

Action:_____

_____

(08) Recommendation:_____

_____

Action:_____

_____

(09) Recommendation:_____

_____

Action:_____

_____

(10) Recommendation:_____

_____

Action:_____

_____

(11) Recommendation:_____

_____

Action:_____

_____

QUALITY PROGRAM INDICATORS

1. Quality Program Indicators (ETG/635-3001/303-5 Memorandum of 87MAR23) Indicators upon which the program evaluation will focus during the visit, as identified during the inbriefing:

a._____

_____

b._____

_____

c._____

_____

d._____

_____

TEACHERS, SPECIALISTS AND ADMINISTRATORS VISITED

1. NAMES/RESPONSIBILITIES NAMES/RESPONSIBILITIES

1._____ 2._____

3._____ 4._____

5._____ 6._____

7._____ 8._____

9._____ 10._____

11._____ 12._____

13._____ 14._____

15._____ 16._____

17._____ 18._____

19._____ 20._____

21._____ 22._____

23._____ 24._____

25._____ 26._____

27._____ 28._____

29._____ 30._____

31._____ 32._____

2. Notes:

a._____

_____

b._____

_____

c._____

d. _____

e. _____

f. _____

SCIENCE PROGRAM MANAGEMENT

1. General Observations:	Yes	No
a. Program Administration.		
(01) A science committee coordinates the science program.	_____	_____
(02) A science committee has full administrative responsibility for the science program except teacher evaluation.	_____	_____
(03) Supervision of the science program is done by regular school administrators.	_____	_____
(04) Supervision of the science program is judged to be adequate.	_____	_____
(05) Administrative support of the science program is adequate.	_____	_____
b. Curriculum Coordination:		
(01) There is vertical coordination in the program from grade to grade.	_____	_____
(02) There is horizontal coordination among teachers at the same grade level.	_____	_____
(03) Repetition in content is limited from year-to-year except where it is planned.	_____	_____
(04) Teachers have an opportunity to plan with other teachers;		
(a) in the same grade.	_____	_____

(b) teaching different grades. _____|_____

c. Decision-making Process in the Science Program:

(01) Teachers have frequent opportunities to provide input regarding the science program. _____|_____

(02) Teachers have great independence in developing their science classes. _____|_____

(03) Teachers have few opportunities to influence the science program. _____|_____

2. Name of the science committee chair._____

3. Number of teachers of science:_____

4. Frequency of science meetings:_____

5. Observations/Recommendations:

a. Observation:_____

_____

_____

Recommendation:_____

_____

b. Observation:_____

_____

_____

Recommendation:_____

_____

SCIENCE BUDGET

(DS Manual 2005.1, Administrators' Guide, section 402):

1. Dollar Amount (total):_____

a. Consumable Materials:_____

b. Equipment:_____

c. Library Materials:_____

d. Science Kit Refills:_____

e. Textbooks:_____

2. Name of Person Who Drafts the Science Budget:_____

3. Process Used When Drafting the Budget:_____

_____

_____

_____

_____

_____

4. Yearly Budget Deadline:_____

5. Observations/Recommendations:

a. Observation:_____

_____

_____

Recommendation:_____

_____

b. Observation:_____

_____

_____

Recommendation:_____

_____

c. Observation:_____

_____

_____

Recommendation:_____

_____

d. Observation: _____

_____

_____

Recommendation: _____

_____

LIBRARY AND MEDIA CENTER

1. General Adequacy: The presence of sufficient, appropriate science books, student periodicals, professional science teaching periodicals and science media programs is essential to a good science education program. All of these items should be matched as closely as possible with the science program objectives and teaching methods required by the curriculum. Versatility, intended use, the user, and application to student investigations must be considered in assessing the appropriateness of existing library and media center inventories to adequately support the science education program as well as assessing new purchases in the area of science.

To assess the general adequacy of the science library and media center portion of the science program, all components that have been met in the list below should be checked.

FUNDAMENTAL	SUBSTANTIAL	EXEMPLARY
(_) Sufficient library books and media programs are available to support all activities and topics in the classes offered.	(_) All necessary instructional resources including audio visual resources related to the science curriculum are available in the media center.	(_) Full use is made of instructional media to supplement science learning in the classroom.
(_) An annual budget provides for the purchase of science books and media programs.	(_) Equipment and library materials provided for in the in the curriculum plan are available to individuals for use when conducting investigations.	(_) Lists of science media programs held by the media center are available for teacher use.
		(_) There is an on going program conducted by media specialist to evaluate the currency of science books and media programs.

2. Books:

a. Approximate Number of Science Books Held: _____

b. Are the Science Books Well Distributed Across All Science Areas?_____

_____

3. Approximate Number of Science Reference Documents Held:_____

a. Professional Periodicals (subscriptions) in Science Areas:

(01) Number:_____

(02) Names:

(a)_____

(b)_____

(c)_____

(d)_____

(e)_____

(f)_____

b. Student Periodicals (subscriptions) in Science Areas:

(01) Number:_____

(02) Names:

(a)_____

(b)_____

(c)_____

(d)_____

(e)_____

(f)_____

4. Audio/Visual/Media Materials:

a. Number of Programs:_____

b. Distribution across the science areas:_____

_____

5. Observations/Recommendations:

a. Observation:_____

Recommendation_____

b. Observation:_____

Recommendation:_____

c. Observation:_____

Recommendation:_____

d. Observation:_____

Recommendation:_____

COMPUTER PROGRAM IN SCIENCE

1. Software:

   a. Numbers and types of computers:_____

   b. Computer location/s:_____

   c. Number of science software programs held by the school:_____

   d. Is the software compatible with the computers?_____

e. Is the software well distributed across the science areas?_____

f. Ways in which science software is stored, cataloged and distributed to users:

_____

_____

g. Ways in which the computer/s is/are used:

(01)_____

(02)_____

(03)_____

(04)_____

3. Observations/Recommendations:

a. Observation:_____

_____

_____

Recommendation:_____

_____

b. Observation:_____

_____

_____

Recommendation:_____

_____

c. Observation:_____

_____

_____

Recommendation:_____

_____

d. Observation:_____

_____

Recommendation: _____

_____

SCIENCE OBJECTIVES GUIDE

(DS Manual 2200.1, Science Objectives for 1985-1992)

1. Is a copy of the current guide available in the school office files? _____

2. Does each science teacher science have a copy of the most recent guide?

_____

3. Guide usage:

   a. How? _____

   _____

   b. When? _____

   _____

4. Observations/Recommendations:

   a. Observation: _____

   _____

   _____

   Recommendation: _____

   _____

   b. Observation: _____

   _____

   _____

   Recommendation: _____

   _____

   c. Observation: _____

   _____

Recommendation: _____

d. Observation: _____

Recommendation: _____

K-6 LEARNING & TIME ALLOCATION GUIDE

(K-6 Learning & Time Allocation Guide DSM Manual 2000.8, of 85DEC)

1. Are the science sections of the guide available in the school office files?

2. Are guide wall charts posted where they can be used by:

   a. Administrators _____

   b. Teachers _____

   c. Students _____

   d. Parents _____

3. Does each science teacher have a copy of the guide? _____

4. Is there a relationship between information in the science sections of the guide and content in the various science classes?

5. Observations/Recommendations:

   a. Observation: _____

Recomendation: _____

b. Observation: _____

Recomendation: _____

c. Observation: _____

Recomendation: _____

d. Observation: _____

Recomendation: _____

TEACHING STAFF

1. General Adequacy. Competency to teach science requires unique preparation and experience. To reach the optimum performance level, elementary teachers must go well beyond the minimum course work required for certification. They must become involved in professional organizations, read professional journals related to their field and stay abreast of contemporary curriculum recommendations. In addition, qualified science teachers must be able to work cooperatively within a hierarchy of responsibilities to provide a coordinated science program.

To assess the general adequacy of the science teaching faculty, check all components, in the list below, that have been met.

FUNDAMENTAL	SUBSTANTIAL	EXEMPLARY
(_) All elementery teachers have had training in science and methods of teaching science.	(_) The school has one or more teachers who have an emphasis in science and can act as teacher-leader for teaching science.	(_) A majority of the teachers have at least a Master's degree in elementary education and some have specialized in science education.
(_) All science teachers are familiar with existing major curriculum developments at their grade levels.	(_) A majority of the science teachers have attended at least one professional meeting in the past year.	(_) All science teachers are active members of at least one professional organization and a majority have participated in the program of one professional meeting.
(_) A majority of the teachers of science read regularly one professional journal.	(_) All science teachers can show evidence of having specifically studied major curriculum developments in their teaching area.	(_) All science teachers have directly participated in curriculum development, revision or adaptation projects that have been implementated in classroom teaching.
(_) All teachers know appropiate safety practices for conducting laboratory activities at their grade level.	(_) Individual teachers have been designated as having specific leadership responsibilities in conducting the science program.	(_) A qualified individual is designated as coordinator of the science program with other staff members assigned to a hierarchy of teaching-leading responsibilities.

3. Observations/Recommendations:

a. Observation: _____

_____

_____

Recomendation: _____

_____

b. Observation: _____

_____

Recomendation:_____

c. Observation:_____

Recomendation:_____

d. Observation:_____

Recomandation:_____

ADOPTED TEXTBOOKS

(Approved Textbook Listing ERH/635-2151/303-11 Memoarndum of 89AUG18)

1. Is the approved list of science textbooks available?_____

2. Are the approved textbooks being used?_____

   a. K Addision-Wesley Science, 1984:_____

   b. 1-6 HBJ Science, 1985:_____

3. Does each teacher of science have:

   a. A teachers' edition of the approved text?_____

   b. A set of publisher generated program support materials?_____

4. Observations/Recommendations:

a. Observation: _____

_____

_____

Recommendation: _____

_____

b. Observation: _____

_____

_____

Recommendation: _____

_____

c. Observation: _____

_____

_____

Recommendation: _____

_____

d. Observation: _____

_____

_____

Recommendation: _____

_____

TEACHER OF SCIENCE INSERVICE PROGRAM

1. Does the school have an on-going inservice program in science education for teachers?

_____

2. Observations/Recommendations:

a. Observation: _____

_____

_____

Recommendation: _____

_____

b. Observation: _____

_____

_____

Recommendation: _____

_____

c. Observation: _____

_____

_____

Recommendation: _____

_____

NORTH CENTRAL ASSOCIATION (NCA) EVALUATION

1. Date of last NCA Report: _____

2. Science related problems identified on the last NCA report:

a. _____

_____

b. _____

_____

c. _____

_____

d. _____

_____

SCHOOL IMPROVEMENT PLAN

1. Are the science education problems identified on the NCA report addressed here?

_____

a. Actions being taken to resolve these problems:

(01) _____

_____

(02) _____

_____

(03) _____

_____

(04) _____

_____

2. Observations/Recommendations:

a. Observation: _____

_____

_____

Recommendation: _____

_____

b. Observation: _____

_____

_____

Recommendation: _____

_____

c. Observation:_____

_____

_____

Recommendation:_____

_____

d. Observation:_____

_____

_____

Recommendation:_____

_____

STANDARDIZED TESTING PROGRAM

1. What science deficiencies were identified the last time standardized testing was conducted (scores lower than national norms)?

a._____

_____

b._____

_____

c._____

_____

d._____

_____

2. Observations/Recommendations:

a. Observation:_____

_____

_____

Recommendation:_____

b. Observation: _____

Recommendation: _____

c. Observation: _____

Recommendation: _____

d. Observation: _____

Recommendation: _____

GENERAL OBSERVATIONS/RECOMMENDATIONS

1. _____

2. _____

3. _____

4. _____

_____

_____

OUT BRIEFING

1. Name of the person/s with whom the out briefing was held? _____

_____

2. Notes:

a. _____

_____

b. _____

_____

c. _____

_____

d. _____

_____

END

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Date Filmed

March 29, 1991